

## International Conference on Opioids, June 7-9, 2015

The 2015 International Conference on Opioids (ICOO2015) was held in Boston, June 7-9, 2015, at the Joseph B. Martin Conference Center at Harvard Medical School. Attendees from around the world participated in this two plus day conference that featured renowned speakers from many countries presenting the latest research, ethics, legal and clinical application of opioids.



Mary Jeanne Kreek, MD in her keynote presentation, *Metadone Maintenance: An Effective Treatment for Opioid Addiction & for Chronic Pain* detailed the long history of methadone as well as the science behind its current use.

Sincere thanks and congratulations to all our ICOO 2015 presenters, conference committee, educational partners and co-chairs for creating a truly world class event!  
Join us for ICOO 2016, June 5-7, 2016!



Dr. Carol Warfield discussing recent legal cases and issues faced by healthcare providers who prescribe opioids in her presentation *Legal Issues from a Physician's Viewpoint*.



Massachusetts Governor Charlie Baker discussing the epidemic of opioid abuse and deaths in Massachusetts.

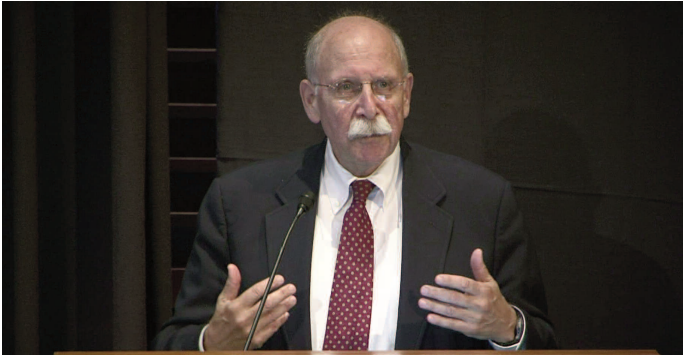


Dr. Kreek presenting her business card while enlightening Massachusetts Governor Baker and Health and Human Services Secretary Sudders on the need for additional advanced education in opioids for medical professionals.



Co-Chairs, Dr. Paul Sloan (left) and Dr. Mellar Davis (right) sharing their insights across several sessions including a three hour ER/LA Opioid REMS presentation. Other topics included intrathecal opioids, oxycodone & naloxone PR Combination Analgesics and Sigma-1 Receptors.





**Dr. Gavril Pasternak, presenting *Basic Science of Variability in Opioid Responses and Analgesic Tolerance: Bridging Basic Science to Clinical Relevance*. Dr. Pasternak and Dr. Davis went on to present their latest findings in their presentation *Sigma-1 Receptors: Important Modulators of Opioid Responses and the Development of Sigma-1 Receptor Antagonists as Co-analgesics*.**



**(Left to Right) Sarah K. Moore, PhD, William A. Fusco CASAC, Sharon Levy, MD, Lisa A. Marsch, PhD in their excellent special dinner presentation *Optimizing Treatment for Opioid-Addicted Adolescents and Young Adults: The State of the Evidence*.**



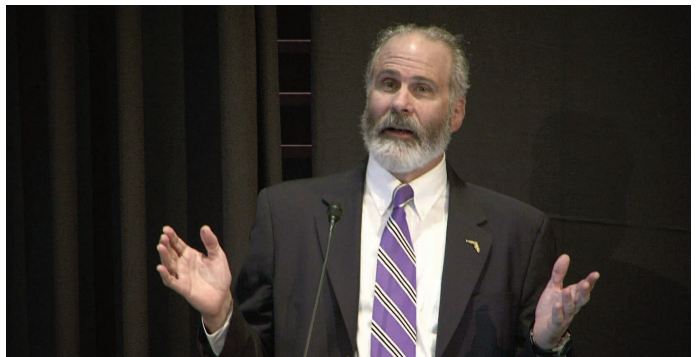
**(Left to Right) Dr. Larry C. Driver and Dr. Michael C. Schatman offering their expertise during a very timely presentation, *Opioid Analgesia and Marijuana - Questions of Balance*.**



**Dr. Jeffrey Fudin presented an interesting discussion on fatal drug interactions titled *Dodging Elusive and Miscalculated Opioid Risks: A Primer on Pharmacogenetics and Unsuspected Drug Interactions*.**

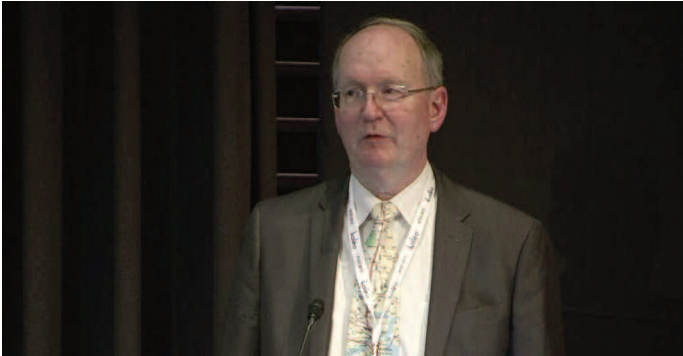


**Dr. Andrew Somogyi traveled from Australia to present *Pharmacogenomics of Opioids: Clinical Translation is Premature* detailing that clinical translation of opioid genetics is premature since many pain and addiction phenotype factors contribute in the final equation.**



**Dr. Gary Reisfield, Special JOM UDT Issue Editor, enlightened the audience on UDT with his presentation *A Primer and Latest Applications of Urine Drug Testing*.**





**Dr. Robert Jamison** discussing the results of a prospective controlled trial in his presentation *Reducing Opioid Misuse Among Chronic Pain Patients In Primary Care*.



**Dr. Mary Lynn McPherson** talking about *Methadone: Update on Safety and Dosing Guidelines* as well as *New Drugs and Drug News in Pain Management*.



**Dr. Eliot Gardner** presenting *Morphine-Triggered Relapse to Cocaine-Seeking Behavior in Laboratory Rats is Attenuated by a Highly-Selective Dopamine D<sub>3</sub> Receptor Antagonist*.



**Dr. Aleksandra Zgierska** discussing the challenges of *Pain Management in Patients with Opioid Use Disorders*.



**Dr. Forest Tennant** details a subgroup of severe chronic pain patients who fail to achieve pain relief in *Chronic Pain Patients Who Fail Standard Opioid Dosages*.



**Dr. William Brose** shares tools, techniques and work flows in physician practices to meet opioid prescribing guidelines in *Meeting Opioid Guideline Prescribing Requirements*.



(Left to Right) **Dr. Douglas Brandoff** and **Dr. Lida Nabati** in an excellent session *Transforming Opioid Prescribing Practice at a Comprehensive Cancer Center*.



(Left to Right) **Dr. Nalini Vadivelu**, **Dr. Lucy Chen** and **Dr. Karina Gritsenko** presenting *Perioperative Pain Management of Opioid Dependent Patients*.

## Call for Proposals

### **2016 International Conference On Opioids**

June 5-7, 2016, Boston, Massachusetts

**The ICOO Program Committee invites the submission of proposals for Papers, Posters, Presentations, Symposia and Corporate Satellite Symposia.**

The *Journal of Opioid Management* will hold its fifth annual **International Conference On Opioids (ICOO 2016)** June 5-7, 2016 in Boston, Massachusetts.

### **Journal of Opioid Management**

Basic Science, Clinical Pain Management, and Compliance

Building on the success of past conferences, this unique forum will be comprised of renowned specialists in basic science, clinical application, and compliance. The program is designed to enlighten primary care physicians, pain care specialists, and other opioid prescribers with new data, essential information, and best practices every medical professional needs to know when prescribing opioid analgesics.

The ICOO 2016 Program Committee requests proposals representing all areas of opioid research, treatment, ethics, opioid abuse and addiction. Proposals from individuals and panels are accepted. Multidisciplinary panels are encouraged to include perspectives from physicians, nurses, psychologists, basic scientists, pharmacists, etc. Moderators should seek participation from a varied group of faculty with a maximum of four participants per proposal. Proposals that include both basic and clinical science are encouraged.

The ICOO 2016 Program Committee suggests the following partial list of topics for submission:

- Translational Opioid & Pain Research
- Basic Science Research in Opioids and Opioid Pharmacology
- Current Topics on Opioid REMS
- Interventional Pain Management Opioid Techniques
- Inequalities in Pain Experience and Pain Management
- Clinical Practice Guidelines for Opioids
- Ethical Issues in the Use of Opioids
- Legal & Regulatory Issues of Prescribing Opioids
- Abuse and Addiction Issues and Opioids
- Pain Management for Cancer Survivors
- Opioids in Acute Pain
- Perioperative Pain Management
- Pain Management in Opioid Addicted Patients

Proposals for previously presented or published work may not be submitted to ICOO 2016 without modification. Original work must be changed or expanded, resulting in a new proposal.

**Presentation proposals accepted thru December 15, 2015.**

**Poster abstract submissions accepted thru April 20, 2016.**

Please note that the moderator is required to include a complete standard format disclosure form as part of the submission. Additionally, moderators should contact the speakers named on the proposal to notify them of their inclusion in the submission, and to

remind them to complete their disclosure information before December 15, 2015.

A complete proposal submission should include the following:

- Presentation Title
- A brief description of the presentation, its need and rationale for your topic at the ICOO 2016 conference.
- Abstract text of 200 words, including information about each presenter's contribution to the presentation.
- A focus statement with succinct description of topics discussed.
- Educational objectives, goals and outcomes.
- Five (5) questions for a post conference test
- Moderator and/or presenter information, including disclosures, bio and picture. Presenter's bio (250-300 words) should include both educational and professional achievements. Bio provided will be published in the program guide and used to introduce speakers. Picture must be high-res .jpg file for printed program.

**Proposal Notification:** Applicants will be notified in mid-February 2016 regarding selection of their proposals. All presenters will receive complimentary conference registration. Other details and terms of participation will be communicated to speakers upon acceptance of their proposal.

**Presentation Times:** Presentations are scheduled to take place Sunday, June 5 through Tuesday, June 7, 2016. All faculty must be willing and able to present on these dates. Symposia sessions are 60 minutes in length. Panel presentations involving multiple presenters will be given additional time.

**Presentation Materials:** PowerPoint slides are required of all speakers. Handout materials including articles, references, etc. are welcomed of all speakers. The session moderator will be expected to assist ICOO Program Committee in the collection and organization of all presentation slides and handout materials.

**Poster Details:** Poster submissions may be previously presented. Poster will be published in our Program Guide and in an issue of the *Journal of Opioid Management* following the conference. Poster presenters are required to register and attend the conference during the poster presentation sessions.

**Continued for 2016 - Top Three Posters Presented:** The top three posters selected by the ICOO 2016 Program Committee will be presented to the full audience during a special 30 minute session. Each poster presenter will have 10 minutes to present their poster and take questions from the audience. Please be available on Tuesday, June 7th if you wish to be considered for this honor.

**Submission Details:** To submit all proposals, please visit [www.opioidconference.org](http://www.opioidconference.org) and use the **ICOO2016 Submission form** available on the ICOO 2016 **Call for Papers** webpage.

Email your form to [jom@pnpc.com](mailto:jom@pnpc.com). For assistance contact us at 781-899-2702, ext 103, 108, 114 from 9 am – 4 pm EST.

#### **Important Dates:**

- Presentation submissions accepted thru December 15, 2015.
- Presentation and symposia decision late January 2016.
- Presentation and symposia notification mid-February 2016.
- Poster abstract submission deadline April 20, 2016.
- Poster decision and notification late-April 2016.
- Presentations due for CME content review May 1, 2016.
- Final presentations due May 20, 2016.



# 2015 INTERNATIONAL CONFERENCE ON OPIOIDS

Posters presented June 7-9, 2015

## **Prescriber ER/LA Opioid REMS Education to Address the Prescription Opioid Misuse Epidemic: The Impact of the Safe and Competent Opioid Prescribing Education (SCOPE of Pain) Program**

Daniel P. Alford, MD, MPH; Lara Zisblatt, EdD, MA; Sean M. Hayes, PsyD; Pamela Ng, MSc; Ilana Hardesty; Julie White, MS

*This presentation will give an update on the national ER/LA Opioid REMS program.*

## **Formulation and Pharmacokinetics of Pegylated Liposomal Morphine**

Pilar Almela, PhD; Victoria Gómez-Murcia, PhD Student; Juan Carmelo Gómez-Fernández; María Victoria Milanés; María Luisa Laorden, PhD

*The purpose of this study was to develop a suitable liposomal formulation for morphine drug delivery and to evaluate its physicochemical characteristics, stability in vitro and pharmacokinetics in mice.*

## **Aberrant Opioid Related Behavior: An Emerging Issue in Patients with Advanced Cancer**

Joseph Arthur, Ali Haider; Tanya Edwards, RN; Jessica Waletich-Flemming; Eduardo Bruera; David Hui

*We report on two patients with aberrant opioid related behavior seen at our supportive care clinic. Effective interventions and strategies utilized by our team helped in addressing the issues.*

## **The Preliminary Impact of Pain Management Integration into an HIV Specialty Clinic**

Timothy Atkinson, PharmD; Sheran Mahatme, DO, MPH; Jeffrey Fudin, PharmD, DAAPM, FCCP, FASHP

*This medical model of health care highlights a collaborative approach that exemplifies superior drug therapy management in a high risk area such as HIV clinics to deliver specialty services that could improve outcomes, mitigate risk, and reduce burden to providers.*

## **Fentanyl Pectin Nasal Spray (FPNS; Lazanda®), Approved for Treatment of BTPc, Allows Direct Absorption of Fentanyl from the Nasal Mucosa, Potentially Permitting Rapid Pain Relief**

Jeannine Brant, PhD, APRN-CNS, AOCN; Iwona Bucior, PhD; Florin Orza, MD

*Many patients with cancer experience acute episodes of severe pain, known as breakthrough cancer pain (BTPc). Fentanyl Pectin Nasal Spray (FPNS; Lazanda®), approved for treatment of BTPc, allows direct absorption of fentanyl from the nasal mucosa, potentially permitting rapid pain relief.*

## **Decreased Pain Following Use of a Topical Analgesic: Interim Results from the OPERA Observational Study**

Michael Brennan, MD; Jeffrey Gudin, MD; Edmund Harris, MD; Peter Hurwitz; Derek Dietze; Christopher Viereck, PhD

*Seventy-eight patients experiencing neurologic or musculoskeletal pain received a topical analgesic (Flurbiprofen 20 percent, Amitriptyline 5 percent, Magnesium Chloride 10 percent, Gabapentin 6 percent, Bupivacaine 2 percent or other comparable pain-relieving transdermal cream) for a mean of 105 days. Pain levels assessed by BPI (Short Form) decreased significantly. Topical analgesic was safe and well tolerated.*

## **Difficulties of Strong Opioid Therapy in Hungary Through a Case of Pancreatic Cancer**

Erika Budai FIPP, MD; Veronika Udvardi, MD

*We interpret the insufficiency of the Hungarian cancer pain management, through a pancreatic cancer patient. Transdermal and oral opioid therapy wasn't successful because of his opioid allergy and intolerable adverse events. For lack of other possibility we introduced tunneled epidural catheter and administered morphine hydrochloride. The cancer patient's pain relief therapy must improve in Hungary.*

## **Cross-Linked Hyaluronic Acid: A Paradigm Shift in the Treatment of Neuropathic Pain**

John A. Campa III, MD

*This 34 month study assesses the safety and efficacy of neural matrix antinociception injection of cross-linked hyaluronic acid in the treatment of 15 neuropathic pain patients, across 22 pain syndromes. Its use as an opioid alternative and adjunct is considered. Three postulates are proffered as a mechanism of action.*

## **Epidemiological Data on Illicit Pain Reliever Use from the 2013 NSDUH Survey**

Cletus Carvalho, MD

*In this poster the author summarizes epidemiological data on the illicit use of pain relievers for clinicians to use as a quick reference resource. Prevalence estimates, trends of illicit and first time use, diagnostic and treatment information along with other data categories relevant to pain relievers is depicted.*

## **In Vitro and In Vivo Evaluation of, and FDA Approved Labeling for, the Abuse-Deterrent Properties of Hysingla™ ER, a Once-Daily, Single-Entity, Hydrocodone Bitartrate Formulation**

Alessandra Cipriano, MSHS; Jennifer Giordano, BS; Shefali Das, BS; Ram P. Kapil, PhD; Salvatore V. Colucci, MS; Stephen C. Harris, MD

*It is important for extended-release opioid formulations to be formulated to resist intentional abuse and accidental misuse. Consistent with the FDA's Guidance on Abuse Deterrent Opioids, the abuse-deterrent properties of Hysingla™ ER, a once-daily, single-entity hydrocodone formulation, were demonstrated through rigorous premarketing studies (laboratory manipulations and clinical abuse potential).*

## **Sustained 24-Hour Plasma Hydrocodone Concentrations and Analgesia Following Administration of a Novel Hydrocodone Single-Entity, Once-Daily, Extended-Release Tablet [Hysingla™ ER, HYD] Formulated with Abuse-Deterrent Properties**

Alessandra Cipriano, MSHS; Warren Wen, PhD; Shau Yu Lynch, PhD; Stephen C. Harris, MD; Ram Kapil, PhD

*A review of steady-state pharmacokinetic and analgesic data following once-daily dosing with single-entity, extended-release hydrocodone (HYD, based on two studies: steady-state pharmacokinetics and long-term effectiveness and safety) showed that HYD provided consistent plasma hydrocodone concentrations and sustained analgesia over the 24-hour dosing interval.*

## **Health Care Utilization and Costs Associated with Constipation Compared to No Constipation Among Patients with Opioid Use**

Catherine Datto, MD, MS; Ancilla W. Fernandes, PhD; Suma Vupputuri, PhD, MPH; David M. Kern, MS; Charles McLeskey, MD; Yen-Wen Chen, PhD; Ozgur Tunceli, PhD

*This poster will present the results of a study to assess constipation-related and pain-related costs and health care utilization over 1 year among adult patients with opioid-induced constipation (OIC) receiving chronic pain therapy. Understanding constipation-related costs may assist in addressing the economic burden of pain therapy in patients with OIC.*

## **See Me, See Me Not? The Nurse's Role in the Growing Issue of Aberrant Drug Use in Palliative Care Practice**

Tonya Edwards, RN, BSN, MS, CCRP; M. Jessica Waletich-Flemming, PharmD; Joseph Arthur, MD; Suresh Reddy, MD

*This abstract describes innovative interventions initiated at an outpatient supportive and palliative clinic which became highly successful in ensuring safe opioid use and curbing issues of aberrant drug use at a tertiary cancer center.*

**Patient Knowledge of Safe Use of ER/LA Opioid Analgesics Following Implementation of the Class-Wide REMS**

Daina Esposito, MPH; Judith Stephenson, MS; M. Soledad Cepeda, MD, PhD; Paul Coplan, MD, ScD; Jennifer Hawes, MS; Crystal Holick, ScD, MPH; Jean-Yves Maziere, MS, MD

*In this survey, we found that ER/LA opioid REMS was effective in getting the Medication Guide to patients, and patients were knowledgeable about safe use of ER/LA opioid analgesics. The Patient Counselling Document was less widely used, and patient-reported counseling about discontinuation and disposal was limited.*

**Development of an Immunoassay Urine Drug Screen App for Interpreting Unexpected Results**

Jeffrey Fudin, PharmD, DAAPM, FCCP, FASHP; Nadia Shahzad, PharmD; Nicholas Jarrett, BS, MA, MS, PhD Candidate; Thien Pham, BS, PharmD; Erika Prouty, BS, PharmD Candidate

*Urine drugs tests (UDT) by IA are frequently employed by PCPs and pain clinics to monitor for compliance and use of unprescribed illicit substances. Unexpected false (+) and (-) are frequent. This app was developed to aid clinicians and patients to accurately interpret these test results.*

**BEMA Buprenorphine Efficacy and Tolerability in an Enriched-Enrollment, Randomized Withdrawal Study in Opioid-Experienced Patients with Moderate-To-Severe Chronic Low Back Pain**

Joseph Gimbel, MD; Egilius Spierings, MD, PhD; Nathaniel Katz, MD, MS; Qinfang Xiang, PhD; Evan Tzanis; Andrew Finn, PharmD

*BioErodible MucoAdhesive (BEMA®) Buprenorphine is a buccal dosage form delivering buprenorphine across a wide dose-range, for use in chronic pain management in diverse patient populations. The present study demonstrated the efficacy and tolerability of BEMA Buprenorphine in opioid-experienced patients requiring treatment for moderate-to-severe chronic pain.*

**Prevalence of Diagnosed Opioid Abuse in Patients Prescribed Immediate Release Hydrocodone in the United States**

Pamela Holly, JD; Abhishek Chitnis, MPharm, PhD; Clark Paramore, MSPH; Samuel Huse, BS; Jill Bell, PhD; Edward Michna, MD; Rami Ben-Joseph, PhD

*Over the past decade there has been a rise in levels of opioid abuse. Immediate release hydrocodone is one of the most commonly prescribed opioids in the US. However, no recent study has investigated the prevalence of opioid abuse in patients using immediate release hydrocodone.*

**Risk Comparison for Selected Birth Defects Associated with Prenatal Use of Analgesics**

Julia Interrante, MPH  
*Research suggests opioid use in early pregnancy increases the risk for certain birth defects; however, it is unclear how these risks compare with other analgesics. We compared single-ingredient acetaminophen use to opioid use and opioid-acetaminophen combination use to examine associations with selected birth defects.*

**Urine Drug Testing for Patients Receiving Chronic Opioid Treatment for Pain in the Academic Internal Medicine Clinic**

Sweta Kakaraparthi MD; Hassan Baydoun, MD; Sarah Bur; Rita Akaraz-Avedissian, MD  
*A quality improvement study.*

**Using a Clinical Dashboard Health Information Technology Tool to Improve Adherence to Opioid Prescribing Guidelines in Primary Care**

Khushbu Khatri, BS; Daren Anderson, MD; Ianita Zlateva, MPH; Nicholas Ciaburri, BS  
*Primary care providers have limited resources to monitor and care for patients receiving chronic opioid therapy (COT) and face time constraints that limit the delivery of comprehensive opioid management. Health Information Technology (HIT) can help improve adherence to treatment guidelines such as use of urine drug testing (UDT), opioid treatment agreements (OTA), and reassessments of pain severity and functional status.*

**Sprinkle Administration of Oxycodone DETERx®: An Abuse-Deterrent, Extended-Release Formulation**

Ernest Kopecky, PhD, MBA; Melinda O'Connor, BA; Ann Marseilles, MS; Joseph Gugliotta, BA; Ravi Varanasi, MPharm; Alison Fleming, PhD

*Oxycodone DETERx® (DETERx) is an extended-release (ER), abuse-deterrent formulation designed to retain its ER properties following common tampering methods such as crushing and chewing. The objective of this study was to assess the safety and pharmacokinetics of DETERx 40mg sprinkled onto applesauce compared with intact DETERx 40mg administered orally.*

**Safety and Effectiveness of Once-Daily Hydrocodone in Patients Switching from Oral Morphine**

Maribeth Kowalski, PharmD, MS, CPE; Kathleen Broglio, DNP; Joseph Pergolizzi, MD; Shau-Yu Lynch, PhD; Ellie He, PhD; Warren Wen, PhD

*This post-hoc analysis evaluated the efficacy and safety of a once-daily, single-entity hydrocodone bitartrate tablet (HYD) formulated with abuse-deterrent properties in individuals rotating from oral morphine to HYD during an open-label, long-term study with a 12-month maintenance-period.*

**Ceasing Intrathecal Hydromorphone-Bupivacaine-Clonidine in Chronic Non-Cancer Pain**

Susan Krikorian, PharmD; Oussayma Moukhachen, PharmD, BCPS; Erin Shaheen, PharmD  
*To describe a case where intrathecal pain therapy was ceased abruptly after removal of an implantable drug delivery system (IDDS) due to an urgent complication.*

**Discordance Between Patient and Healthcare Provider Reports of the Burden of Opioid-Induced Constipation**

Catherine Datto, MD, MS; Robert LoCasale, PhD, MS; Hilary Wilson, PhD; Karin Coyne, PhD, MPH

*This poster will present the results of patient-physician surveys and chart reviews regarding the burden of opioid-induced constipation (OIC) with regard to treatment satisfaction, treatment benefit, and adequacy of pain management. Understanding dissimilar patient-physician perceptions of OIC may assist in addressing the added burden suffered by those with chronic pain.*

**Influence of the CRF System in the Basolateral Nucleus of the Amygdala (BLA) and Dentate Gyrus (DG) on Arc Expression During Morphine Withdrawal-Associated Memory Retrieval**

M. Victoria Milanes, MD, PhD; Ester Valero, PhD Student; Ivan Gomez-Milanes, PhD Student; Cristina Núñez, PhD; Pilar Almela, PhD; M. Luisa Laorden, MD, PhD

*We have evaluated the role of CRF1R in morphine withdrawal-induced both aversive memories and Arc expression in the BLA and DG. Our results suggest that CRF1R would be implicated in memory consolidation and retrieval but not in Arc expression in the BLA. In addition, CRF might have a negative effect on Arc expression at the DG.*

**Effect of Methadone Treatment on Outcome of 18-FDG PET Scan in a Non-Diabetic, Non-Cancer Patient**

Enoch Arhinful, BSc(Hons), MD; Kenneth Rucker, MD

*We present the case of a 33 year old gentleman with history of polysubstance abuse and actively participating in a drug treatment program with methadone in whom a routine evaluation of dyspnea led to unexpected PET-CT findings.*

**STOPPA –Stop To the Opioid Prescription Abuse**

Lenka Katila, MD; Mathilda Söderberg; Måns Thulin, PhD

*Quality control project and characterization of opioid prescription in multidisciplinary pain centrum at Swedish teaching hospital.*

### **Expression of Heat Shock Protein 27 and Troponin T and I After Naloxone-Precipitated Morphine Withdrawal**

M. Luisa Laorden; Elena Martínez-Laorden, PhD;  
M. Victoria Milanés; Pilar Almela

*We have evaluated the cardiac adaptive changes induced by morphine treatment and its withdrawal. Our results lead to the hypothesis that Hsp27 may probably preventing cTnT degradation via reducing the interaction of  $\mu$ -calpain with cTnT. These findings could help to understand the cardiac dysfunction observed in addict patients.*

### **Morphine Produce Better Thermal Analgesia in Young Huntington Mice with 84 CAG Trinucleotide Repeats**

Yen-Chin Liu MD, PhD; Ya-Chi Lin, MSc; Yu-Chuan Tsai, MD

*Huntington's disease (HD) is well-known for affecting motor nerve and cognitive system. However, little research focus on sensory portion for this disease. Investigating analgesic effect of morphine on HD may improve care quality of those patients and enhance our understanding for this fetal nerve disease.*

### **Assessment of Hospital Nurses' Ability to Monitor Opioid Therapy**

Alexandra McPherson, MPH; Kshelle Lockman, PharmD; Kathryn Walker, PharmD

*Monitoring opioid therapy is a critically important role for nursing staff. This survey assessed nurses' ability to identify discriminating monitoring parameters for a patient receiving an opioid. Results showed significant knowledge deficits, and an educational initiative designed to address this would be an appropriate next step.*

### **Prescription and Illicit Drug Trends in Buprenorphine Positive Oral Fluid Specimens**

Katie Miller, PharmD, BCPS; Anne DePriest, PharmD, BCPS; Timothy Robert, PhD, D-ABCC; David Black, PhD, D-ABFT, FAIC; Yale Caplan, PhD, D-ABFT

*This poster highlights the importance of drug testing in patients undergoing pain management and/or opioid maintenance treatment. Buprenorphine has been increasingly abused in recent years and providers may not be aware of the importance of testing for it in patients for whom it is not prescribed. A separate consideration is that buprenorphine is generally thought of as having a more favorable safety profile than other opioids, but risks associated with its use in conjunction with other drugs may be underappreciated.*

### **Opioid Chimeras—Potent Analgesics with Less Tolerance Development**

Ahmed Mousa, PhD; Henrik Druid, PhD; Steven Ballet, PhD

*Opioid chimeras are promising analgesics which may be more potent than classic opioids by acting on additional pain regulating systems. We studied the production of select biomarkers for tolerance development and addiction potential in cell cultures exposed to an opioid-neurotensin hybrid, PK20, as compared to morphine and heroin.*

### **Genetics and Drug Response: Study on the Influence of Genetics in Individual Variations in Response to Hydromorphone Use**

Tobore Onojighofia, MD, MPH; Bilikis Akindede; Natasha Anand, MS; Daniel Schwarz, MD; May Hafez, MD; John Hubbard, RPT; Brian Meshkin; Maggie Hopkins, MD, MBA, Svetlana Kantorovich, PhD

*With genetic factors possibly accounting for 20 to 95 percent of observed individual variation in drug response, the response to hydromorphone in treating chronic pain may be influenced by genetics.*

### **Study to Comprehensively Calculate Risk of Aberrant Behavior to Opioids by Incorporating Genetic and Phenotypic Risk Factors in Pain Patients**

Tobore Onojighofia, MD, MPH; Bilikis Akindede; Natasha Anand, MS; Daniel Schwarz, MD; May Hafez, MD; John Hubbard, RPT; Brian Meshkin; Maggie Hopkins, MD, MBA, Svetlana Kantorovich, PhD

*With the rise in deaths caused by prescription opioid pain reliever (OPR) overdoses, it is important to effectively predict a patient's risk of aberrant behavior to OPRs.*

### **Role of Genetics in Risk of Opioid Abuse: Relationship Between Genetics and the Opioid Risk Tool**

Tobore Onojighofia, MD, MPH; Bilikis Akindede; Natasha Anand, MS; Daniel Schwarz, MD; May Hafez, MD; John Hubbard, RPT; Brian Meshkin; Maggie Hopkins, MD, MBA, Svetlana Kantorovich, PhD

*The Opioid Risk Tool (ORT) is a 5-question assessment designed to predict which patients may develop aberrant, drug-related behaviors based upon known risk factors associated with abuse or addiction; however, the relationship between the ORT and genetics warrants exploration.*

### **Role of Genetics in Risk of Opioid Abuse: Relationship Between Genetics and SOAPP®-R Test**

Tobore Onojighofia, MD, MPH; Bilikis Akindede; Natasha Anand, MS; Daniel Schwarz, MD; May Hafez, MD; John Hubbard, RPT; Brian Meshkin; Maggie Hopkins, MD, MBA, Svetlana Kantorovich, PhD

*The SOAPP®-R is utilized by physicians to predict aberrant behaviors among chronic pain patients considered for long-term opioid therapy; however, the relationship between the SOAPP®-R and genetics warrants exploration.*

### **Genetics and Drug Response: Study on the Influence of Genetics in Individual Variations in Response to Suboxone Use**

Tobore Onojighofia, MD, MPH; Bilikis Akindede; Natasha Anand, MS; Daniel Schwarz, MD; May Hafez, MD; John Hubbard, RPT; Brian Meshkin; Maggie Hopkins, MD, MBA, Svetlana Kantorovich, PhD

*With genetic factors possibly accounting for 20 to 95 percent of observed individual variation in drug response, the response to suboxone in treating opioid addiction and dependence may be influenced by genetics.*

### **Assessing Hospice Nurses' Opioid Monitoring Knowledge and Skills**

Ihuoma Onyewuchi, PharmD; Kshelle Lockman, PharmD;  
Mary-Lynn McPherson, PharmD, BCPS, CPE

*Opioids are commonly prescribed for managing end-of-life pain. Consequently, hospice patients are at high risk for opioid-related adverse events. Hospice nurses, therefore, must be able to identify discriminating therapeutic and toxic opioid monitoring parameters in order to circumvent these adverse events.*

### **BEMA Buprenorphine Efficacy and Tolerability in Opioid-Naïve Patients With Moderate-To-Severe Chronic Low Back Pain**

Richard Rauck, MD; Jeffrey Potts, MD; Qinfang Xiang, PhD; Evan Tzanis; Andrew Finn, PharmD  
*BioErodible MucoAdhesive (BEMA®) Buprenorphine is a buccal dosage form delivering buprenorphine across a wide dose-range, for use in chronic pain management in diverse patient populations. The present study demonstrated the efficacy and tolerability of BEMA Buprenorphine in opioid-naïve patients requiring treatment for moderate-to-severe chronic pain.*

### **Comparison of Systemic and Cerebrospinal Fluid Disposition of Nasally and Sublingually Delivered Fentanyl**

Iwona Bucior, PhD; Cuiping Chen, PhD; Amitabh Gulati, MD; Srinivas Rao, MD, PhD  
*We tested and confirmed the hypothesis that fentanyl exhibits a faster absorption and higher bioavailability to the site of action when delivered intranasally than sublingually. Three treatments were administered (intranasal- and sublingual-fentanyl 200 ug and intravenous-fentanyl 100 ug) in this open-label, randomized and crossover study in 12 healthy subjects.*

### **Variability in Opioid Equivalence**

Amanda Rennick, PharmD; Jeffrey Fudin, PharmD, FCCP, FASHP  
*A survey was used to ask nurse practitioners, pharmacists, and physicians to convert five opioids to their morphine equivalents. These equianalgesic conversion estimates were compared and revealed large standard deviations, regardless of profession. This research provides quantitative evidence that no universal method exists to consistently convert one opioid to another.*



### Prevalence of Clinically Aberrant Urine Drug Test Results in an Obstetric and Gynecologic Patient Population

Ali Roberts, Pharm.D., BCPS

*A retrospective review was conducted of urine specimens submitted from 41 obstetrics and gynecology clinics in 21 states across the United States from 01/03/2013 to 12/31/2013. All drug testing was performed directly by mass spectrometry-based methods. A total of 2,528 specimens were tested. Of these, 1,033 demonstrated clinical aberrancies (41%).*

### Improved Chronic Pain, Mood & Function and Reduction in Opioid Reliance Following Engagement in Multidimensional Self-Care

Seddon Savage, MD, MS

*Outcomes data on patients treated at an interdisciplinary program that engages patients in self-management of chronic pain are presented. Measures of pain, pain interference, anxiety, depression, catastrophizing and opioid use suggest patients benefit from engagement in self-management and reduce opioid use, with 63 percent discontinuing opioids, 19 percent continuing reduced analgesic doses and 17 percent requiring opioid-agonist treatment of addiction.*

### Rates of Diagnosed Opioid Abuse Among Patients with Chronic Use of Immediate-Release Opioids

Amie Shei, PhD; Jill A. Bell, PhD; Noam Y. Kirson, PhD; Casey Jones, BA; Alice Kate Cummings, BA; Howard Birnbaum, PhD; Rami Ben-Joseph, PhD

*This study estimates rates of diagnosed opioid abuse among chronic users of immediate-release opioids. Rates of diagnosed opioid abuse were substantial. The rate was higher when evaluated over a longer period, suggesting that assessments of the burden of opioid abuse should consider a longer patient history.*

### CR845, a Novel Peripherally-Acting Kappa Opioid Receptor Agonist, has Low Abuse Potential Compared with Pentazocine

Joseph Stauffer, DO, MBA; Frederique Menzaghi, PhD; Paul Tiseo, PhD; Robert Spencer, PhD  
*CR845 was studied in a single-center, randomized, double-blind, active- and placebo-controlled trial in which 39 recreational polydrug users received an IV dose of CR845 5 mcg/kg, CR845 15 mcg/kg, placebo, and pentazocine. This trial met the primary endpoint with drug liking scores for pentazocine significantly greater than that of placebo and either dose of CR845.*

### Detection of Non-Disclosed Prescription Drugs and Illicit Compounds in Hair: Utility When On-Boarding New Patients

Richard Stripp, PhD; Damon Borg, PhD; Elizabeth Fey

*Combination of a patient's Current Opioid Misuse Measure (COMM) score along with corresponding toxicology results from multiple matrices provided greater insight into patient drug use, misuse, and abuse. Through the analysis of urine, oral fluid, blood, and hair specimens simultaneously collected from pain management patients, valuable information was obtained regarding aberrant medication-related behaviors. Utilization of all four matrices provided insight into a patient's risk level and the resulting data can be used as the driving force for the development of effective drug testing program parameters.*

### Surprising Truths About Opioid Misuse: Correlating Laboratory and Pharmacy Data to Identify and Monitor High-Risk Patients

Richard Stripp, PhD; Damon Borg, PhD; Elizabeth Fey, MS

*Prescription drug monitoring program (PDMP) provides valuable information prior to prescribing or dispensing drugs. Utilization serves as a patient safety checkpoint; however, its use in the pain management industry is lacking. Assessing PDMP data alongside lab results provides greater insight into effective treatment or a glimpse into potential drug abuse.*

### Recent Legal and Regulatory Amendments and the Current Status of Opioids in India

Prema Tejaswi, MBBS (MD Student); Pooja Reddy, MD; Chhaya Goyal, MD

*This review focuses on the latest legal and regulatory changes affecting the availability of opioids and other obstacles limiting its use in India.*

### Integrating Digital Monitoring Within an Interdisciplinary Opioid Tapering Program: A Case Report Template

Valerie Weed, PsyD; Kate Nycz, APRN; David DeBenedetto, MD, DABPM;

Kelly Wawrzyniak, PsyD; Ronald Kulich, PhD

*A case study is presented as a template for the use of digital monitoring devices to improve activity during an interdisciplinary opioid tapering program.*

### Evaluation of Once-Daily Hydrocodone in Patient Subgroups

Warren Wen, PhD; Shau Yu Lynch, PhD; Ellie He, PhD; Steven Ripa, MD

*This post hoc analysis evaluated the effectiveness and tolerability of single-entity, once-daily hydrocodone in patient subgroups. Improvements in pain reduction and function were seen regardless of subgroupings.*

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